aspect ratio

When the ratio of the image is different from the ratio of the canvas we want to paint the image on the canvas and maintain the ratio of the picture without distorting the image.

The image:

The canvas:

The canvas will have a predetermined width or height and the second size we will have to calculate according to the ratio of the image.

The formula for calculating the canvas length / width:

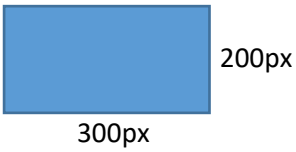
$\frac{CH}{CW} = \frac{IH}{IW}$ The equivalence of canvas and image relations

$\mathrm{CH} = \frac{IH * CW}{IW}$ The formula for calculating the height of the canvas (if the width of the canvas is predetermined)

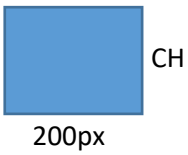
$\mathrm{CW} = \frac{IH * CH}{IW}$ The formula for calculating the width of the canvas (if the height of the canvas is predetermined)

Example:

The image:



The canvas:



In this example, we want to calculate what the height of the canvas should be so that when we draw the picture on it will maintain its ratio.

We will use the formula to calculate the height of the canvas above:

$$\mathrm{CH} = \frac{200 * 200}{300}$$

$$\mathrm{CH} = 133px$$

The height of the canvas should be px133 so that we can draw the image well on it.